

# ORNL INSTRUMENT EVALUATION SUMMARY

## NE (Thermo Electron RMP) Delta Floor Monitor Model FLM30

**Description:** The NE FLM30 is a dual scintillation based floor monitor that uses an NE Delta count rate meter.

**Ranges Tested:** N/A

**Report Date:** December 5, 2002

**General Comments:**

1. Confidence intervals used to ascertain whether results are conclusive or inconclusive are determined using the 0.95 quantile of the student's t distribution (95% confidence interval).

### RADIATION RESPONSE

**Probe Surface Sensitivity:** To be reported.

### ELECTRONIC and MECHANICAL REQUIREMENTS and TESTS

**Line Noise:** N/A

**Power Line Variations:** N/A

**Conducted Radio Frequency:** N/A

### INTERFERING RESPONSES TEST RESULTS

**Radio Frequency/Microwave:** Susceptibilities were indicated at frequencies from 75 to 82 MHz during the RF scan from 100 kHz to 1000 MHz at  $20 \pm 2$  volts/meter amplitude modulated with 1 kHz at 80%. Specific information is available in the test report.

**Electric Fields:** Not performed.

**Magnetic Fields:** Susceptibilities were observed when exposed to a 10 Gauss DC field in both orientations relative to the magnetic field emission lines. No susceptibilities were indicated when exposed to the 60 Hz (1.26 Gauss) AC field in two orientations.

**Interfering Ionizing Radiations:** Not performed.

### ENVIRONMENTAL FACTORS

**Temperature:** No susceptibilities were observed over the temperature test range of -10 to 50 °C (+14 to +122 °F).

**Temperature Shock:** No unacceptable responses were observed when the FLM was exposed to rapid temperature changes from 22 to -10, -10 to 22, 22 to 50, and 50 to 22 (in °C). Each change was performed within five minutes.

**Humidity:** No susceptibilities were observed when exposed to a relative humidity level of 95% (non-condensing) for twenty-four hours.

**Vibration:** Not performed.